

Assessment of Chinook and Chum Salmon Escapements in the Holitna River Drainage Using Radiotelemetry, 2004

In 2004 a radiotelemetry study was performed in the Holitna River drainage. The purpose of the study was to estimate the proportion of Chinook salmon *Oncorhynchus tshawytscha* and chum salmon *O. keta* returning to the Holitna River drainage that passed through the Kogruklu River weir, and to estimate the abundance of Chinook and chum salmon escaping into the Holitna River drainage. Chinook and chum salmon were captured by fishing with drift gillnets near the mouth of the Holitna River. A portion of the total catch was radio-tagged with esophageal transmitters. Subsequent movements of all radio-tagged salmon were monitored with three stationary tracking stations that logged radio-tagged fish that migrated up the Hoholitna River, the Holitna River upstream of the Hoholitna River, or, the Kogruklu River past the weir. Radio-tagged salmon were also located during aerial radio-tracking surveys of the Holitna River drainage. The estimate of Chinook salmon abundance was 81,961 fish (SE = 10,150). The proportion of Chinook salmon past the Kogruklu River weir was 0.23. The estimate of chum salmon abundance was 996,216 fish (SE = 640,754). The proportion of chum salmon past the weir was 0.045. Radio-tagged Chinook and chum salmon were located in numerous areas throughout the Holitna River drainage. Chinook salmon predominantly spawned in first and second order tributaries, and most chum salmon spawned in the mainstem Holitna River.

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